

Mr. Gould makes the following remarks with regard to the enormous powers of flight possessed by this bird:—"The keel or breast-bone of this species is more than ordinarily deep, and the pectoral muscles more developed than in any bird of its weight with which I am acquainted. Its whole form is especially and beautifully adapted for extended flights, hence it readily passes from one part of the world to another, and, if so disposed, may be engaged in hawking for flies on the continent of Australia at one hour, and in the next be similarly employed in Tasmania."

5. PHALACROCORAX PUNCTATUS. Spotted Shag.

I have already published (*Ibis*, 1888, p. 44) a description by Mr. J. C. McLean of the nesting of this species near Cape Kidnappers. He has since forwarded me an egg, taken from the nest by himself. It measures  $2\frac{8}{10}$  inches in length by  $1\frac{8}{10}$  in greatest diameter.

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XXX.—*Notes on the Spotted Shag (Phalacrocorax punctatus)*.

By J. C. McLEAN.

IN the January part of 'The Ibis' for last year (*Ibis*, 1888, p. 42) appeared a paper, by Mr. T. W. Kirk, entitled "Notes on the Birds of New Zealand," in which is a note of the occurrence and breeding of the Spotted Shag (*Phalacrocorax punctatus*) in the North Island of New Zealand.

Mr. Kirk quotes parts of Sir Walter Buller's remarks to the effect that this species is plentiful in the South Island, but that only a few instances are known of its occurrence in the North Island, and that three is the usual number of eggs laid. Mr. Kirk points out that I had never seen more than two eggs in a nest. At that time I had only once visited the nests when there were eggs and young. Since then, however, I have had better opportunities for visiting and observing this small colony or "Shaggery," and have taken more eggs. I was very fortunate last season (1888), and have some interesting facts to record.

It was in December 1881 that I first visited Cape Kid-

nappers and saw these beautiful birds ; and, if I remember rightly, there were only two nests, one of which contained eggs, for, although I could not get to the nests, I could see an egg showing over the edge of one of them

I revisited the spot on December 23, 1885, and found six nests—five on the ledge where they were in 1881 and one on the opposite side of the rock. One of the five contained two eggs, three had each two young ones, and the fifth was empty. The nest on the opposite side contained two eggs, but was out of my reach.

On December 27, 1886, I was surprised to find neither eggs nor young, although the old birds were at the nests. There were seven nests, one of which had not been used or, rather, repaired, as the others had.

On December 17, 1887, there were five nests on the ledge, only one of which contained anything—an addled egg—and two on the opposite side, one containing three eggs, and the other two young and an egg. On another rock were two empty nests, and on another two containing young birds. On the rock on which was the egg there were a number of fully-fledged young, that crowded to one end of the rock on my approach, and then dropped into the sea. Altogether, old and young, there were about twenty birds of this species about the reef.

My first trip there last season was on December 21, 1888. Mr. A. Hamilton had visited the Shags on November 9, and had found the nests to contain young birds covered with down, and therefore not long hatched. The tide was coming in and I had very little time ; so, after getting thoroughly wet while going out to the rock, I climbed up, expecting to find young birds in the nests. Imagine my surprise when I found each nest to contain eggs. There were eight nests on the ledge, but the two that last season were on the opposite side were gone—ledge and all. I took three clutches, made a few notes, and made for dry land, which I reached in a soaked condition. On another rock, to which I could not get, were three nests on a small ledge.

The nests, eight in number, were placed about two feet

apart, on a ledge some fifteen inches wide and twenty-five feet long, that ran along one side of the rock about three feet from the top and eight from the base. The rock measures about forty feet by eighteen and is about twelve feet high ; it is surrounded by water, and is very difficult of access.

The first nest contained three eggs, the second three, the third two, the fourth three, the fifth two, the sixth two, the seventh one, and the eighth two. It will therefore be seen that four nests each contained two eggs, three three, and one one. The eggs I took were very slightly incubated.

The nests are repaired every year for each laying, the old nests being used as a foundation. When recently finished, the different coloured seaweeds used give the nests a very pretty appearance. They are far smaller than the nests of the Black Shag (*Ph. novæ-hollandiæ*) and are more finely built. They are substantially built of twigs and coarse seaweed, and are neatly repaired and lined with small twigs, fibrous roots, tufts of grass, and fine seaweeds, with an occasional wing- or tail-feather of the parent bird. The nest measures as follows :—Width at base 20 inches, width of cavity 8, depth of nest 4, depth of cavity 1·5.

The egg is elliptical in shape and, when freshly laid, is of a pale bluish green clouded with chalky white ; it measures in length 2·2 inches, and in breadth 1·5. When blown and held to the light the interior shows a deep sea-green. After being in the nests some time the eggs become very much stained and dirty. The cloudy appearance is due to the chalky substance that may be seen on all Shags' eggs. In some places the eggs are scratched and the chalky substance chipped off, as if by the point of the bird's bill, or the claws, when turning the eggs in the nest. They are slightly smaller than those of the Black Shag, and vary slightly in size. Of eight eggs the largest measures 2·25 inches by 1·5, and the smallest 2·1 by 1·4 ; the largest and smallest eggs of one clutch measure 2·25 by 1·5 and 2·15 by 1·4 respectively, and of another clutch 2·2 by 1·5 and 2·1 by 1·4.

On January 2, 1889, the fourth and fifth nests contained young birds of a sooty black colour, without a sign of down. In the other nests the eggs had not hatched.

As Mr. Hamilton saw young birds in the nests on November 9, and I found each nest containing eggs on December 21 following, it is quite evident that the Spotted Shag breeds twice in the same season.

In this part of New Zealand 1s. 6d. is paid by the Acclimatisation Society for each pair of feet of the Black Shag (*Ph. novæ-hollandiæ*), as this species is reputed to destroy the imported fish. Now, a Shag is a Shag with the general public, irrespective of species; in fact, according to them, a Gannet (*Dysporus serrator*) is, as shown by the feet sent in as those of the Black Shag! However, it is to be hoped that this colony will not be "wiped out," as has been the case with several "Shaggeries" of the Black Shag and of the White-throated Shag that I once knew of.

XXXI.—*On an apparently undescribed Species of Owl from the Liu Kiu (or Loo Choo) Islands, proposed to be called Scops pryeri.* By JOHN HENRY GURNEY.

MR. LEONHARD STEJNEGER has satisfactorily shown, in the 'Proceedings of the United States National Museum' for 1886, p. 639, that the Scops Owl described by the late Mr. Cassin under the title of "*Ephialtes elegans*" is a good and distinct species, resident in the Liu Kiu Islands.

I am indebted to the kindness of Mr. Henry Seebohm for the opportunity of examining a specimen in his collection of this rare species, and agree with Mr. Stejneger's conclusion as to its specific distinctness.

This, however, is not the only Scops Owl to be found in the Liu Kiu group, and my present object is to describe two specimens of the second Liu Kiu species, which were obtained from that locality by the late Mr. Pryer, in commemoration of whom, I would propose for this hitherto undescribed Owl the name of *Scops pryeri*.

Of the two specimens which I have examined, one is an adult, now preserved in the Norwich Museum, the other a young bird which I have no doubt had left the nest, but